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CENTRAL INTELLIGENCE AGENCY

INTELLIGENCE MEMORANDUM NO. 354
(CIA/RR IM-354)

WORLD PRODUCTION AND TRADE IN INDUSTRIAL DIAMONDS
WITH PARTICULAR REFERENCE TO
THE US AND THE USSR

15 June 1951

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Note: This report has not been coordinated with the intelligence organizations of the Departments of State, the Army, the Navy, and the Air Force. It contains information available to CIA as of 15 May 1951.

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Summary

Industrial diamonds have become increasingly essential to mass production in modern industry. The small size and light weight of diamonds are out of all proportion to their importance but also make it very difficult to control their shipment. The greatest demand for diamonds began during World War II in the manufacture of war material and has continued unabated. Since the principal source is limited largely to areas in Africa, far removed from the US and the USSR, industrial diamonds are of particular strategic importance to both countries. Annual US requirements are between $4\frac{1}{2}$ and 5 million carats,¹ or about one-half of the total world output. The UK and Canada are the next largest consumers. The needs of the Soviet Bloc are relatively small -- between 225,000 and 300,000 carats, of which the USSR consumes about two-thirds. Only a small part of the US stockpile objectives had been secured as of 1 January 1951. The present Soviet stockpile would probably last a year.

The US, because of its highly mechanized industry, would be particularly affected by any interruption in the supply of industrial diamonds. Although there is some hope of reducing the need for diamond crushing bort by a substitute process, the industrial diamond requirements of modern industry are expected to continue essentially the same.

The production and sale of industrial diamonds are largely controlled by the West, but the location of most of the African diamond-producing areas makes them strategically vulnerable in case of war.

1. The carat is the unit by which most gems are weighed. The international metric carat (CM) is equivalent to 0.2 gram, or 3.086 grains (155.54 carats being equivalent to a troy ounce).

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1. Introduction.

Diamonds, because of their hardness, which is greater than that of any other natural or artificial substance, are the most important gem stones used in modern industry, and they have become essential in the development of precision machinery. Without diamond abrasive wheels and other diamond tools, the mass production of machine tools and precision instruments would be impossible.

The small size and light weight of diamonds are out of all proportion to their importance but also make it very difficult to control their shipment. For example, the total world output of all types of diamonds in 1950 weighed only slightly more than 3 short tons. A quarter of a million carats of industrial stones thus weigh about 125 pounds. The weight limit in the diplomatic pouch is usually about 100 pounds, and therefore the quantity of diamonds that could be shipped by diplomatic pouch assumes considerable importance.

a. Varieties.

All types of diamonds, including gem-grade, may be classified as industrial. However, there are three general kinds of industrial diamonds: bort, industrial stones, and waste from the cutting and polishing of gem stones. Bort is a trade name for flawed, off-color, or broken fragments of diamonds unsuitable for gems. This material is fragmented to specific grain sizes and is marketed as crushing bort. Industrial stones include off-color, colorless, and some imperfect stones unsuitable for gems; carbonadoes, or black diamonds, a very hard and extremely tough aggregate of very small diamond crystals; and ballas, a very hard and tough globular mass of diamond crystals radiating from a common center.

b. Principal Applications.

Industrial diamonds are classified by use as tool stones, die stones, crushing bort, and diamond powder. Tool stones include industrial diamonds used in drill bits utilized by the mining, petroleum, and heavy construction industries; in boring and turning tools, where the diamond is mounted on a suitable tool and used to produce finishes of one-thousandth-of-an-inch tolerance; and in dressing and truing tools, in which the diamond is used to true other types of abrasive wheels and to give a high finish to automotive and aircraft parts. Die stones, or diamond wire-drawing dies, are pierced sound stones of

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1/4 to 3/4 carat which are used to draw wire uniformly to extremely fine sizes. Crushing bort, which is graded to size and embedded or bonded with metal or resins, is utilized in making diamond drill bits and diamond abrasive wheels. The latter are used to sharpen drilling tools and to true other types of abrasive wheels. Diamond powder is fragmented bort crushed to micron sizes and is used to finish carbide dies, jewel bearings, glass lenses, and other glass products and to provide a high and rapid finish on many mechanical products.

c. Substitutes.

Much time and work have been spent in efforts to make diamonds synthetically or to find a satisfactory substitute for industrial diamonds. Until recently, however, little hope of success has been obtained. Boron carbide and silicon carbide powder have been substituted for diamond powder in some uses, and boron carbide molded into dies has been utilized in wire-drawing where tolerance requirements are not too rigid. Tests by the US Bureau of Mines on the substitution of tungsten carbide drill bits for diamond bits have shown that, without resharp-ening, four tungsten carbide bits are required to drill the same footage obtained with one diamond drill bit. Recently, however, the Soviets have discovered an electro-mechanical method for sharpening cutting tools which does not require the use of diamond abrasive wheels or diamond powder. Experimental work in the US with the Soviet process¹ has confirmed its feasibility and has resulted in some advancements and technical improvements in the method.

The utilization of this electro-mechanical method of tool-sharpening should reduce both the cost of sharpening tools and the quantity of industrial diamonds required by industry. This last factor is of particular importance to the US, as it is entirely dependent on imports for its supplies of industrial diamonds. Crushing bort, the

1. The Soviet process employs direct current and a special electrolyte. The tool to be ground and the grinding wheel, a copper disk, are connected in a direct-current circuit so that the tool forms the anode and the grinding wheel the cathode. By the action of the direct current in the electrolyte, a film of insoluble compounds is formed on the anode (the tool), protecting it from further electrolytic action. Removal of this film by the cathode (the rotating grinding wheel) exposes a fresh surface of the metal to the action of the electrolyte and thus assures the continuous removal of metal from the anode. The equipment required to set up this process is relatively cheap, and a high degree of skill is not required to operate it.

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bulk of which is used in the manufacture of abrasive wheels now employed to sharpen tools, makes up 81 percent of the US stockpile objective of industrial diamonds. If the major use for bort could be eliminated or drastically reduced, large sums of money could be saved and US dependence on an overseas source could be avoided.

2. World Production and Reserves.

With a few minor exceptions, reasonably accurate statistics are now available for total world production of diamonds of all types. Accurate figures for world reserves of diamonds, however, are not available.

a. Production of All Types.

Diamonds have been found in all continents, but commercial production at present is confined largely to Africa, with South America and Asia providing the remainder. Africa accounts for about 97 percent of the annual world output; South America, 2 to 2½ percent; and Asia, ½ to 1 percent. South American and Indian mines have not been explored and developed on the same scale as in Africa, and production comes entirely from placer deposits. Various diamond fields produce stones of different quality, and the percentage of fine stones per mine also varies. Only a small part of the annual world production is suitable for cutting into fine gems of 1 carat or more (about 200,000 cut stones out of a total of 14 million carats produced). About one-quarter of the total is off-color gem material, and the remainder, or 60 to 75 percent, is suitable only for industrial purposes. (The annual output of all types of diamonds by countries in 1937 and in the 1942-50 period is given in Table 1, Appendix.) Definite information on the production of diamonds in the USSR is negligible, but the annual output is very small. The only known deposits are in the gold and platinum mining areas west of the Urals in the Chkalov district and in the Kama Valley near Cherdin, which contain a few diamonds, and in the placer mines on the east slope of the Middle Urals near Neoganskoi, Sverdlovsk, and Troitsk.

b. Reserves of All Types.

The known reserves of all types of diamonds are not very large and at the present rate of consumption are believed to be sufficient for

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about 30 to 40 years. The African fields contain the major known reserves of diamonds. India is the oldest known diamond field but, like Borneo, is largely worked out. Brazil, British Guiana, and Venezuela produce from placer deposits alone and are regarded as minor sources.

The underground mines in South Africa (known as pipe mines)¹ normally have reserves plotted from 3 to 5 years ahead, and the large mines undoubtedly have reserves for several years, but, as they get deeper, the pipes decrease in size, as does the average diamond content. Many of the South African alluvial fields have been exhausted. The fields in South-West Africa, the Congo, and the Gold Coast have reserves blocked out for about 10 to 12 years in the future and are believed to have reserves for 20 years' additional operations. In Tanganyika, only one diamond pipe has been discovered, and operations to date have been limited to the area surrounding the pipe. However, estimates of the quantity of diamonds both in the surrounding area and in the pipe itself are not available. Mining in French Equatorial Africa until recently has been on a small scale and only now is being mechanized.

c. Production and Reserves of Industrial Diamonds.

Before 1937 the quantity of diamonds used industrially was relatively small, and interest in the annual output was comparatively slight. Therefore, no breakdown of the world production of diamonds showing the quantity of industrial diamonds mined was published. At the beginning of World War II, large supplies of bort had been accumulated because of lack of a market. The war brought on industrial demands for mineral raw materials, machine tools, and precision instruments that provided an outlet for the surplus bort and for larger quantities of diamond tools and die stones. This wartime demand has continued unabated. (For an estimate of the annual production of industrial diamonds, see Table 2, Appendix.)

1. So-called from the pipelike form of the vertical cylindrical masses of igneous rock in which diamonds are found.

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Industrial diamonds make up about 60 to 85 percent of the total annual production of diamonds by weight and account for about 25 percent of the total value. Total figures for the production of diamonds in the Belgian Congo are broken down to show the quantities of gem and industrial stones recovered. However, figures for other producing countries show only the total quantity of diamonds produced and a rough percentage estimate of the part of the total output that may be industrial.

(1) Production Trends.

The annual world production of industrial diamonds for the 1942-50 period averaged about 8,470,000 carats (see Table 2, Appendix). Output reached a peak of 11,181,800 carats in 1945 and then declined to a low of 6,774,800 carats in 1947. Since 1948 the trend has been upward, showing a sharp increase in 1949. The output in 1951, it is believed, will be slightly higher than in 1950. The increased output is expected to come largely from the mines in the Belgian Congo, with smaller contributions from French Equatorial Africa and the Gold Coast. The mines in the Belgian Congo, which account for about 86 percent of the total annual output of industrial diamonds, are being mechanized, and a systematic program for development and mechanization is also being introduced at the diamond fields in French Equatorial Africa.

(2) Reserves.

Bort is a by-product of all diamond mining except in the Belgian Congo, where industrial diamonds make up more than 90 percent of the output. Reserves of industrial diamonds, therefore, are included in the total diamond reserves. Exact figures on industrial diamonds, most of which come from the large gravel deposits of the Belgian Congo, the Gold Coast, Sierra Leone, and Angola, are not available, but it is believed that reserves of this type in the known diamond deposits will be adequate for about 40 years at the 1950 rate of consumption.

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3. Marketing.

As already stated, the principal diamond deposits, both gem and industrial, are found in Africa. The production and sale of the African output of gem and industrial diamonds, with the exception of French Equatorial Africa, is controlled by a cartel.

a. Cartel Control.

The diamond cartel, which is variously referred to as the "Diamond Corporation" or "The Syndicate," has its headquarters in London and is made up of the following companies, all of which are British: The De Beers Consolidated Mines, Limited; its subsidiary, the Consolidated Diamond Mines of South-West Africa, Limited, and its wholly-owned subsidiary, the South-West Finance Corporation, Limited. These organizations own all the shares of the Diamond Corporation, Limited, which has contracts for the purchase of the diamond production from the Belgian Congo, Sierra Leone, Angola, the Gold Coast, and Tanganyika, all of which, with the exception of the Belgian Congo, are under British control. The cartel also controls the sale of rough diamonds of gem and industrial grade. The Diamond Trading Company, Limited, is the sales agent for gem stones, and Industrial Distributors (1946), Limited, is the sales agent for industrial diamonds.

French Equatorial Africa is the only potentially large source of diamonds in Africa which is outside the control of the cartel. The diamond mining industry in this area is controlled by the International Mining Company, the East Ubangi Mining Company, and the Diamond Prospecting and Exploitation Company, an affiliate of the East Ubangi Mining Company. The International Mining Company also controls the Ogooni-Lobaze Mining Company, which engages in both gold and diamond mining.

b. Processing and Distribution.

The run-of-mine diamond production controlled by the Diamond Corporation is shipped from Africa to London for classification into industrial- or gem-grade material. Then all material classified as bort is shipped back from London to Johannesburg, South Africa, for

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fragmentation. This step, a comparatively recent one, was started in 1946. During World War II, some dealers purchased bort, sorted the material, "peeled" some of the larger stones to obtain gem-grade diamonds, and sold them at a much higher price. In order to stop this leak of gem-grade material, the Diamond Corporation instituted the practice of fragmenting the bort before sale. The fragmented bort (crushing bort) is then returned to London for marketing.

Industrial diamonds, like gem-grade material, are sold by series and purchased by lot number from samples shown by Industrial Distributors (1946), Limited. The opportunity to purchase industrial diamonds is made available only a few times each year, and the quantity that may be purchased by one country during a calendar year is limited. There are no direct sales of gem or industrial diamonds by the Diamond Corporation to the Soviet Bloc.

4. World Consumption by Countries.

Diamonds are one of several mineral commodities of which the major consuming countries are not the producers. By far the largest consumer is the US, followed by the UK and Canada. Statistics on the annual consumption, however, are not available.

US industry requires $4\frac{1}{2}$ to 5 million carats of industrial diamonds annually, or about half the total world output. These requirements, however, are not filled, and consumption is about 3 to $3\frac{1}{2}$ million carats, about 75 to 80 percent of which is crushing bort. About 70 to 80 percent of the crushing bort consumed is utilized in the manufacture of abrasive wheels. Annual consumption by the UK is believed to be about 1 to $1\frac{1}{2}$ million carats, and that by Canada about $\frac{1}{2}$ to 1 million carats.

Information on the postwar consumption of industrial diamonds by the USSR can be expressed only in terms of the available supply of imported stones. This supply is obtained largely from Belgium, the Netherlands, and Switzerland and through black-market and smuggling activities. (Declared exports by Belgium and the Netherlands to Soviet Bloc countries for the 1947-50 period are shown in Table 3, Appendix.) Swiss imports of industrial diamonds from Belgium in 1949 increased through each quarter and for the year amounted to 15 percent of the total exports from Belgium, as compared with 0.09 percent in 1948, and 1.3 percent in 1947. In 1950, however, Swiss imports of industrial

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diamonds from Belgium decreased to 9.6 percent of the total exports from that country. It has been reported [REDACTED] that up to 95 percent of the Swiss imports were for transshipment to the Soviet Bloc. (Declared exports from Belgium and the Netherlands to Switzerland for the 1947-50 period are shown in Table 4, Appendix.) The reduction in direct exports of industrial diamonds from Belgium and the Netherlands to Switzerland in 1950 is attributed to the withdrawal of open licenses for export of this material to Switzerland. An exporter of industrial diamonds to Switzerland must now apply for an individual license.

The USSR also purchases industrial diamonds directly through the Soviet Legations in many of the diamond-producing or processing countries. Purchases by a Legation are regarded as local transactions, and export licenses are not required. Thus these sales do not appear in export statistics.

It is reported that Czechoslovakia purchased 2,800 carats of industrial diamonds from Brazil in May 1950 and 53,485 carats of diamonds of all types from French Equatorial Africa in the first 5 months of that year. Although a breakdown showing the type of diamonds received in the latter shipment is not available, it seems probable, in view of their relatively low dollar value, that most were of industrial grade.

Most of the industrial diamonds imported by Germany are from Belgium and totaled 40 carats in 1948, 2,389.18 carats in 1949, and 71,389.18 carats in 1950. Although Belgian export statistics do not differentiate between East Germany and West Germany, the major portion probably was utilized in the Soviet Zone, as there are few industries in West Germany that use industrial diamonds. It is assumed that the Zeiss wire-drawing plant at Jena, reported to require 6,000 carats of die stones per month, has been the principal ultimate consumer of imports from Belgium.

It is estimated that about 422,400 carats of industrial diamonds were exported to the Soviet Bloc in 1949 and about 242,000 carats in 1950 (see Table 5, Appendix). The apparent reduction in imports by the Soviet Bloc in 1950, however, is not real and reflects rather the increased amount of black-marketing, smuggling, and direct shipments by diplomatic pouch. The total annual supply of industrial diamonds

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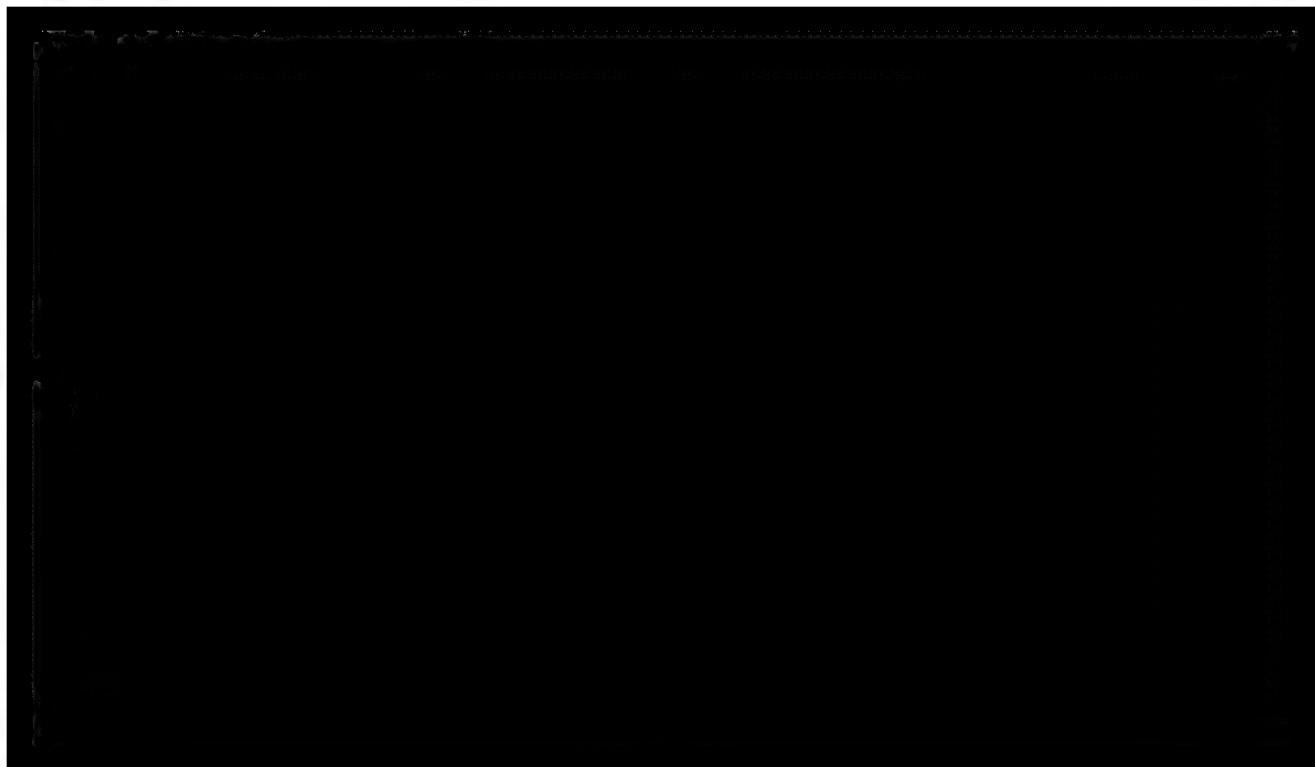
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available to the Soviet Bloc is estimated to be from 400,000 to 450,000 carats. Annual consumption by the USSR is estimated to be from 150,000 to 200,000 carats, and by the European Satellites from 75,000 to 100,000 carats, or a total of from 225,000 to 300,000 carats for the Soviet Bloc. The remainder of the supply, about 100,000 to 150,000 carats, is believed to be stockpiled.

5. Possibilities of Control for Strategic Purposes.

In the event of war the output and marketing of industrial diamonds would obviously rest with the West, as the UK, Belgium, and France control the production of diamonds in Africa, and the Diamond Corporation, with headquarters in London, controls the sale of the majority of them. However, because of the location of most of the African diamond-producing areas, they would be strategically vulnerable. At present, the greatest danger is labor unrest resulting from Communist infiltration of labor organizations in the Gold Coast, French West Africa, and Sierra Leone.

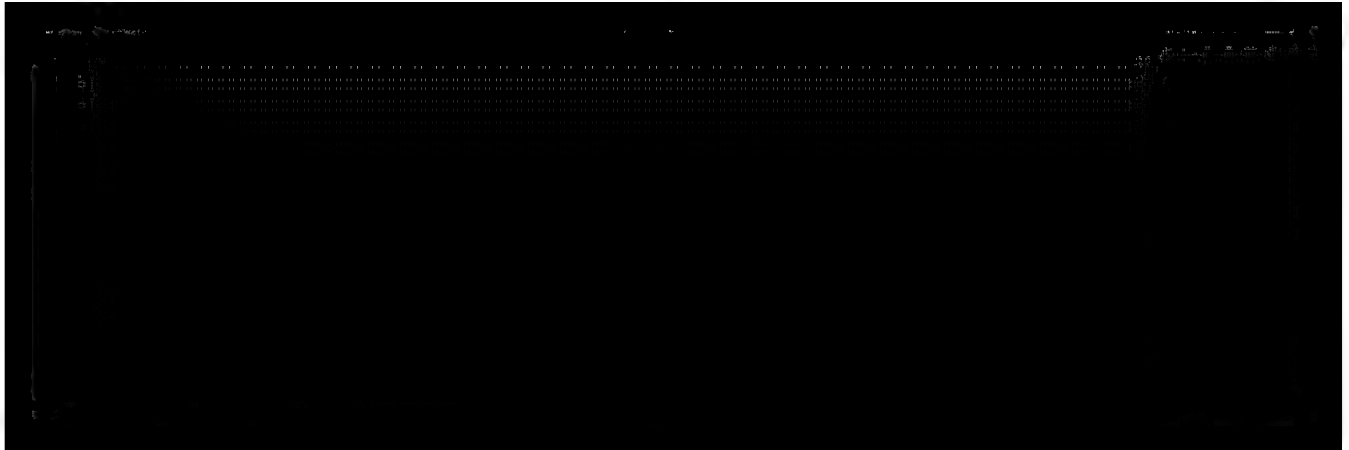
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b. Stockpiling.

Stockpiling of industrial diamonds is feasible and relatively simple. Diamonds do not deteriorate, and the only requirement is a safe place for storage. The difficulty so far in building up a stockpile is, for the most part, a shortage of mined stones. As of 1 January 1951, only 37 percent (4,070,047 carats) of the US stockpile objective for industrial stones and 19 percent (9,481,415 carats) for crushing bort had been obtained.

c. Preclusive Buying.

Cartel control of the industrial diamond industry should present an ideal means to prevent the sale of diamonds to a potential aggressor nation. However, any attempt to set up a preclusive buying contract under which the present cartel, the Diamond Corporation, would restrict its sales to countries not trading with the Soviet Bloc is believed to have little chance of success. Through the cartel program, the mining companies are guaranteed a fixed gross income per year which in turn is reflected in the well-being of the people and the stability of the local governments. Diamonds in European and African countries represent not only a profitable industry but also, at least in some of them, a hedge against inflation.

d. Probable Effects on the Soviet Bloc.

A drastic reduction in shipments of industrial diamonds to the Soviet Bloc would reduce greatly the efficiency of the fabricated metal

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industry in that area, because the Bloc countries are almost entirely dependent on imports for their supply of industrial diamonds. The USSR is developing a large metal-production and machine-manufacturing program as a part of its long-range plan to increase industrial capacity for peacetime as well as for armament requirements. Thus Soviet demands for metal-cutting tools, wire-drawing dies, and other precision instruments are large. The supplies now available are believed to be adequate for peacetime operations, but in case of war the USSR would be faced with the difficult problem of maintaining even the present level of imports. At the present rate of consumption the Soviet stocks, estimated at 100,000 to 150,000 carats, would last only a year. The USSR would therefore probably be required -- at least in the initial stages of a war -- to ration the available supply, which would result in an immediate shortage in that country and the rest of the Soviet Bloc. Although the electro-mechanical method of sharpening tools pioneered by the USSR should reduce somewhat the quantities of industrial diamonds required, no reduction in efforts to obtain them is apparent, and requirements are expected to continue essentially the same. Without sufficient industrial diamonds, mass production methods in the industries of the Bloc countries would be severely hampered.

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APPENDIX

TABLES

Table 1

World Production of Rough Diamonds (Gem and Industrial)
1937 and 1942-50a/

Country	1937	1942	1943	1944	1945	1946	1947	1948	1949	Metric Carats 1950
Angola	626,424	794,853	794,990	799,120	803,887	806,961	799,210	795,509	769,981	538,866
Belgian Congo	4,925,228	6,018,236	4,881,639	7,533,365	10,386,000	6,033,452	5,474,469	5,824,567	9,649,968	9,699,597
Fr. Equat. Africa	5,588	46,345	56,183	60,000	82,849	87,381	107,076	118,800	122,928	123,500b/
Fr. West Africa	57,687	49,866	36,193	69,726	79,802	51,834	62,310	77,970	94,996	126,346
Gold Coastc/	1,577,661	1,055,735	1,317,798	1,165,858	812,451	830,000	852,493	850,000b/	432,530	440,000
Sierra Leone	913,401	1,046,187	834,492	608,744	504,309	559,229	605,554	465,518	494,119	495,000b/
South-West Africa	196,803	56,420	94,427	154,379	152,629	163,611	179,554	200,691	280,134	504,603
Tanganyika	3,234	40,327	52,998	90,667	115,666	119,446	92,229	148,169	191,787	70,597
Union of S. Africa	1,030,434	118,821	302,329	933,682	1,141,242	1,281,787	1,204,734	1,200,000b/	1,254,022	1,731,510
Brazil d/	238,606	300,000	275,000	301,000	275,000	325,000	275,000	250,000	250,000	260,000
British Guiana	35,958	22,207	18,272	13,911c/	15,442	30,958	24,669	36,301	34,790	37,462
Venezuela	d/	34,048	22,846	22,037	12,769	20,912	61,634	75,513	56,392	56,500b/
Otherse/	6,000	6,788	6,804	12,000	2,000	1,600	3,500	3,500	3,000	3,000b/
Total	9,617,024	9,589,833	8,693,971	11,764,489	14,384,046	10,312,171	9,742,432	10,046,538	13,634,647	14,086,981

a/ Statistics from Bureau of Mines Minerals Yearbook.

b/ Estimated.

c/ Imports.

d/ Not available.

e/ Partly estimated and includes India, Borneo, Australia, and the USSR.

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Table 2

Estimated World Production of Industrial Diamonds ^{a/}
1937 and 1942-50

Country	Percent of Total Out- put Reported as Industrial Diamonds	Metric Carats									
		1937	1942	1943	1944	1945	1946	1947	1948	1949	1950
Angola	40	250,600	316,600	318,000	320,000	321,600	322,800	319,600	318,200	307,900	165,500
Belgian Congo	92	4,531,000	5,537,000	4,492,000	6,931,000	9,555,000	5,554,000	5,036,000	5,358,000	9,099,545 ^{c/}	9,163,290 ^{c/}
Fr. Equat. Africa	67.5	4,000	31,000	37,900	40,500	55,900	58,900	72,200	80,100	82,900	83,400
Fr. West Africa	85	49,000	42,300	30,700	59,200	67,800	44,000	52,900	66,200	80,700	107,394
Gold Coast	75	1,183,000	791,800	988,000	874,300	609,300	622,500	639,300	637,500	323,400	330,000
Sierra Leone	60	548,000	627,700	500,700	365,200	302,500	355,500	363,300	279,300	269,500	297,000
South-West Africa	5	9,800	2,800	4,700	7,700	7,600	8,100	8,900	10,000	14,000	25,000
Tanganyika	25	800	10,000	13,200	22,600	28,900	29,800	23,000	37,000	47,900	17,649
Union of S. Africa	5	51,500	5,900	15,100	46,600	57,000	64,000	60,200	60,000	62,700	86,575
Brazil	60	143,000	180,000	165,000	180,000	165,000	195,000	165,000	150,000	150,000	156,000
British Guiana	40	14,400	8,800	7,300	5,500	6,100	8,900	9,800	14,500	13,900	14,984
Venezuela	40	^{b/}	13,600	9,100	8,800	5,100	8,300	24,600	30,200	22,500	22,600
Total		6,785,100	7,567,500	6,581,700	8,861,400	11,181,800	7,271,800	6,774,800	7,041,000	10,474,945	10,439,300

a/ The figures shown are based on the percentage figure reported by the producing countries. The quantity and quality of diamonds produced annually, like other mineral raw materials, vary from year to year, and thus the percentage figures given in the first column of the table may vary about 5 percent.

b/ Not available.

c/ Actual figure reported by the Belgian Congo.

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Table 3

Declared Exports of Industrial Diamonds from Belgium and the Netherlands to the Soviet Bloc
1947-50

Belgium to:	1947	1948	1949	1950	Metric Carats Total
Czechoslovakia					
Poland	2,839.35	1,360.00	4,508.00	9,104.00	17,811.35
Rumania	146.07	190.75	0	0	336.82
Hungary	0	0	392.00	0	392.00
USSR	0	0	7,117.53	18.50	7,136.03
		7,766.75	99,130.60	39.19	106,936.54
Total	2,985.42	2,317.50	111,148.13	2,161.69	132,612.74
Netherlands to:					
Czechoslovakia					
Poland	9,110.00	51,631.00	46,700.00	32,000.00	139,441.00
Hungary	784.00	0	9,900.00	1,600.00	12,284.00
Yugoslavia	0	0	2,900.00	1,900.00	4,800.00
Germany (Soviet Zone)	2,322.00	16,809.00	0	0	19,131.00
USSR	0	0	10,000.00	0	10,000.00
		24,883.00	106,300.00	0	131,183.00
Total	12,216.00	93,323.00	175,800.00	35,500.00	316,839.00
Grand Total	15,201.42	102,640.50	286,948.13	44,661.69	449,451.74

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Table 4

Declared Exports of Industrial Diamonds to Switzerland
from Belgium and the Netherlands
-1947-50 a/

Country	Metric Carats			
	1947	1948	1949	1950
Belgium	7,358.71	958.00	155,697.06	108,775.00
Netherlands	614.00	3,276.00	10,000.00a/	3,000.00a/
Total	7,972.71	4,234.80	165,697.06	111,775.00

a/ Partly estimated.

Table 5

Total Estimated Exports of Industrial Diamonds to the Soviet Bloc
1949-50

	Metric Carats	
	1949	1950
Exports from Belgium and the Netherlands to the USSR	286,948.13	89,420.00
80 Percent of Imports by Switzerland	131,837.64	87,019.00
Imports by Hungary	1,465.00	1,500.00
90 Percent of Imports from Belgium by Germany a/	2,150.26	64,199.35
Total	422,401.03	242,138.35

a/ Belgian export figures do not differentiate between East Germany and West Germany, but it is estimated that 90 percent of Belgian exports to Germany go eventually to East Germany.